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*Description*

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**FIELD OF THE INVENTION**

The present invention relates to a computer-implemented system and method for assigning ratings ("Ratings") to various investment vehicles (the "Funds") using information from public and privately traded financial futures (the collectively the "Futures").

**BACKGROUND AND SUMMARY OF THE INVENTION**

Futures provide information on expected future returns in various investment areas or asset classes. For example, a financial future on the S&P 500 for the period ending June 2000 is a representation of what the financial markets expect the value of the S&P 500 will be in June 2000. Financial futures are now available for a number of segments of the market, such as US value stocks, US growth stocks, small capitalization stocks, large capitalization stocks, US Treasury Bonds, high yields bonds, etc. By combining information on the Funds with the expected range of future returns, as implied by the pricing of the Futures, one can derive a range of expected future returns, the volatility of future returns, and a rating, which reflects the expected return and the risk of the Fund.

Expanding on the example of the S&P 500 future and a large capitalization mutual fund, if the future indicated that the expected return was an annualized 7%. Using a modification of the Black-Scholes (a widely used option pricing equation developed in 1973 by Fisher Black and Myron Scholes used to price OTC options), one could determine that there was a 66% chance that the return would be within 5 and 9% and a 95% chance that the return would be within 4 and 10% for the period ending June 2000. If the Fund had a historic return that was on average 1% less than the S&P 500, but with the same level of volatility, then the mean expected return would be 6%, and the range of expected returns at the 66% level of confidence would be 4 to 8% (i.e., 1% less than the example with the S&P 500). In the same way, the range of returns at the 95% confidence level would be 3 to 9% (i.e., 1% less than the example with the S&P 500).

In assigning ratings, the expected future return and volatility of future return is compared to that of other investment classes. For example, if large capitalization funds were expected to return 7% with a 4% range at the 66% confidence level, compared to a South American equity fund with an expected return of 5% and a range of 4% at the 66% probability level, the South American sector would be less appealing and therefore have a weaker rating. Note, the relative returns of the Fund are incorporated into the expected future return for the sector in deriving ratings. The Rating represents the expected risk and reward.

Note, the Black-Scholes model is useful for pricing options, whereas we are using futures pricing to determine the expected future returns for various investment areas, and combining that information with the relative performance of a fund and other information such as our assessment of the capability of the investment managers, support staff and characteristics of portfolio securities to derive a rating. Firms that rate Funds use mainly historical returns in assigning ratings.

**DIAGRAM**

Attached is an illustration of the major steps for assigning Ratings.

## MAJOR STEPS FOR ASSIGNING FUND RATINGS

Sector Information		Expected Annualized Median Returns%	Expected Range of Returns%			
Sectors	Corresponding Financial Futures					
<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>			
US Large Cap	S&P 500	7.5	1.5			
Fund Information		Annual Return Adjustment Factor%	Negative Variability of Returns%	Adjustment for Negative Variability of Returns	Fund Group Rating	Adjustment for Fund Group and Other Qualitative Factors)
	Annual Return%	<u>6</u>	<u>7</u>	<u>8</u>	<u>9a</u>	<u>9b</u>
Fund A	6.77	-0.295	-0.3	0.1	*****	80%
Fund B	7.36	0.295	-0.5	-0.1	****	90%
Fund C	3.44	-3.625	-0.1	0.3	***	100%
Fund D	8.98	1.915	-0.9	-0.5	**	110%
Median	7.065		-0.4			

Fund Ratings and Expected Future Returns			Median Expected Annual Returns	Fund Rating
Range of Expected Annual Returns				
Low	High			
<u>10</u>	<u>11</u>		<u>12</u>	<u>13</u>
Fund A	6.105	8.800	7.453	***
Fund B	6.345	8.750	7.548	****
Fund C	2.675	9.300	5.988	**
Fund D	7.265	8.650	7.958	*****
Median	6.225		7.500	

### Notes (refers to the numbers at the bottom of each title):

1. Is a listing of the various sectors or types of funds.
2. Is a listing of the financial futures that correspond to the various sectors. Note, the Futures change over time.
3. Is a listing of the expected returns implied by the Futures.
4. The expected range in future returns as implied by prices of options on the futures and various option pricing models.
5. The annualized returns of the various Funds.
6. The difference between the Fund's return and the median return for other Funds in the sector.
7. Factor for adjusting for the negative variability of the Fund.
8. A comparison of the negative variability of the return for a Fund to the median for the sector.
9. Variance adjustment for qualitative factors such as an assessment of fund management, efficiency, support, systems, and other factors which are reflected in the rating of the Fund Group.
- 10 and 11. The low expected annual return is equal to the median annualized return for the sector (column 3) adjusted for the range of returns (column 4), the Fund's Annual Return Adjustment Factor (column 6), the Adjustment for Negative Variability of Returns (column 8), and for the Qualitative Factors (column 9).
12. Is the Median of the Expected High and Low Returns.
13. Rating for the Fund based on the median and range versus other funds. In certain cases we use indicators other than "\*" for the rating.

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# System and method for assigning ratings to mutual funds and other investment funds based on the value of various future and option securities

## Abstract

The present invention is a system and method for assigning ratings (the "Ratings") on mutual funds and other investment funds (collectively the "Funds") based on various information gleaned from public and privately traded financial, currency, interest rate and other futures, along with options on said futures (collectively the "Futures"). The system combines information on the historical rates of return and variability in the rates of return of the Funds with the expected range of future returns for various asset classes as determined by the pricing of the Futures. The rating for the Funds (the "Rating") incorporates the range of expected future returns, the variability of past returns, and the level of risk. The benefit of the invention is that it will enable investors to evaluate with greater ease the likely returns and risks for various Funds

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## References Cited

### U.S. Patent Documents

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<u>5132899</u>	Jul., 1992	Fox	364/408.
<u>5148365</u>	Sep., 1992	Dembo	703/36.
<u>5222019</u>	Jun., 1993	Yoshino	364/408.
<u>5237500</u>	Aug., 1993	Perg	364/408.
<u>5471575</u>	Nov., 1995	Giansante	395/144.
<u>5563783</u>	Oct., 1996	Stolfo	364/408.
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## Claims

1. A system for assigning Ratings to Funds using information gleaned from the pricing of Futures. Expected future returns for the Funds are combined with information on the relative performance of the Fund to determine the Rating.
2. ~~The use of Futures for assigning Ratings to the relative attractiveness of Funds~~
3. A listing of the expected range of future returns for the Funds based on pricing and volatility information for the Futures.